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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,209	02/27/2004	Sergio Belli	05788.0208-01	4686
22852	7590	03/06/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EWALD, MARIA VERONICA	
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,209

Applicant(s)

BELLI ET AL.

Examiner

Maria Veronica D. Ewald

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 27, the applicant states "an apparatus according to claim 26, wherein system of gears, or pulleys and gears subjects the at least one conducting element to a constant pull between 600 and 1500 m/min." Subjecting the conducting element to a constant pull between 600 and 1500 m/min provides a process limitation, which does not further limit the apparatus being claimed and provides no additional structural limitation to the apparatus, and therefore renders the claim indefinite.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 – 21, 23 – 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon (U.S. 3,922,128) in view of Greenstreet, et al. (4,918,017).

Solomon teaches an apparatus for the production of a cable having at least one covering layer, said apparatus comprising at least one charging hopper (item 30 – figure 1; column 2, lines 16 – 18), at least one extruder (item 28 – figure 1; column 2, lines 16 – 18), one extrusion screw (item 32 – figure 2; column 2, line 18), and at least one extrusion head inside of which is contained a die (item 16 – figure 1; column 2, lines 24 – 25).

Furthermore, the reference teaches that the apparatus is further comprised of at least one device for unwinding said conducting element (item 12 – figure 1; column 1, lines 66 – 67), a breaker plate positioned downstream of said at least one extrusion screw (item 38 – figure 2; column 2, lines 44 – 45), at least one device for winding said cable (item 26 – figure 1; column 2, lines 14 – 15), at least one cooling unit for cooling said cable (item 20 – figure 1; column 2, lines 7 – 8), and a drying stage positioned downstream from said at least one cooling unit (items 22, 24 – figure 1; column 2, lines 10 – 13). Solomon, however, does not teach the presence of a filter support plate nor a filtration unit in conjunction with the breaker plate.

In a method to remove foreign particles from an elastomeric material being discharged from an extruder, Greenstreet, et al. teach the use of a screen assembly or filter support plate provided with slotted flow passages, such that the flow passages are parallel to the inlet direction of the composition to be filtered (figures 17 and 18; column 3, lines 20 – 25, 30 – 35). In addition, the filter support plate (item 80 – figure 17) consists of a dish-shaped one piece metal member with an outer annular ring and a dome-shaped central portion (column 8, lines 25 – 27). There is a series of elongated

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slots provided for the passage of the filtered elastomeric material (column 8, lines 28 – 35). Furthermore, there is a dish-shaped metal mesh screen, complementary in shape to the support (item 81 – figure 18), which is draped on and supported by the support member (figure 18; column 8, lines 37 – 45). The use of the support member with the elongated slots, in contrast to the previously-used perforated plates reduces considerably the amount of back pressure generated in the elastomeric material, and thus, provides a more rigid structure able to withstand the internal pressures created by the elastomeric material (column 8, lines 57 – 61). Furthermore, the use of the mesh screen filters out any foreign particles from the elastomeric material (column 1, lines 10 – 15). This reads on the Applicant's claims that the filtration unit has a filter support plate, comprising an internal surface and a plurality of elements which protrude therefrom and define a plurality of sectors between and within which the filtered composition flows, and wherein said plurality of sectors define at least one passage for the filtered composition that is substantially parallel to the inlet direction of the composition to be filtered.

Therefore, it would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the apparatus of Solomon with the filter assembly of Greenstreet, et al. for the purposes of providing a filter assembly that not only filters out foreign matter from the elastomeric material but also withstands the back pressures generated by the extruded elastomeric material as taught by Greenstreet, et al.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon in view of Greenstreet, et al. and further in view of Marin (U.S. 5,182,066). Solomon and Greenstreet, et al. teach the characteristics previously described, but do not teach that the extruder apparatus have a crosslinking unit.

In a method to apply a layer of insulation around an electrical cable core, Marin teaches the use of an extruder apparatus. Marin also teaches that a cross-linking section may be used in which a cross-linking agent is added to the heated plastic and subsequently mixed (column 3, lines 39 – 40). This reads on the Applicant's claim that the apparatus be comprised of at least one crosslinking unit positioned before said at least one cooling unit.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the extruding apparatus of Solomon configured with the filtering device of Greenstreet, et al. to further incorporate the cross-linking section of Marin for the purpose of adding a cross-linking agent to the melted plastic.

Claim 26 is rejected as being unpatentable over Solomon in view of Greenstreet, et al., and further in view of Portinari. (U.S. 4,673,540). Solomon and Greenstreet, et al. teach the characteristics previously described but do not teach that the extruder have a system of pulleys, gears or pulleys and gears.

In a method to cover an optical cable with plastic having helical grooves in its surface, Portinari teaches the use of a pulley mounted to freely rotate on a support extending from a shaft driven by a gear to advance the cable into and out of the

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extruder (column 4, lines 25 – 26). This reads on the Applicant's claim that the at least one conducting element is subjected to a constant pull by a system of pulleys, gears, or pulleys and gears.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the extruding apparatus of Solomon and Greenstreet, et al. with the system of pulleys and gears of Portinari for the purpose of moving the cable through the production line at a constant pace as taught by Portinari.

Claim 27 is rejected as being unpatentable over Solomon in view of Greenstreet, et al., further in view of Portinari and further in view of Rosato (*"Extruding Plastic, A practical processing handbook"*, 1998). Solomon, Greenstreet, et al. and Portinari teach the characteristics previously described, but do not teach that the cable is subjected to a pull of between 600 and 1500 m/min, respectively.

In the above-listed handbook, Rosato teaches that typical output rates of extruders for coating cable can be at least 1300 m/min for certain products, which is within the range stated above by the Applicant. Thus, it is known to one of ordinary skill in the art that the range stated above is typical and can be attainable by conventional tension capstans, pulleys or gears.

It would have been obvious therefore, to modify the extruder of Solomon with the filtration unit of Greenstreet, et al. to further incorporate the pulleys/gears of Portinari to operate such a system of pulleys/gears within the range of 600 and 1500 m/min for the

purpose of controlling the output rate of the extruder and its associated equipment as discussed by Rosato.

Response to Arguments

15. Applicant's arguments filed on December 20, 2005 have been fully considered but they are not persuasive. Applicant argues that claim 27, as written, which states "...subjecting the at least one conducting element to a pull between 600 m/min and 1500 m/min..." is an operational limitation not a method limitation and provides a structural limitation to the apparatus, since one of ordinary skill in the art would have to give thought to the type of pulley/gear system and configuration of such pulleys/gears, such that the configuration would produce a pull between 600 m/min and 1500 m/min. However, Examiner still disagrees. If Applicant is arguing that a specific configuration is necessary to maintain such a constant pull, *then the specific configuration, type of pulley/gear system or components of such a system should be identified in the claim.* If such components are identified, then the claim would properly recite a structural or physical limitation.

In addition, Applicant's arguments with respect to claims 20 – 25 and 28 have been considered but are moot in view of the new ground(s) of rejection. Applicant has argued that the apparatus of Miki, et al. teaches away from the use of a porous filter support plate, since Miki, et al. states it is unnecessary to use such a plate in conjunction or in lieu of his filtering device and therefore, Miki, et al. fails to teach a filter support plate used in conjunction with a filter. Examiner agrees and has cited the art of

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Greenstreet, et al. Greenstreet, et al. teach the use of a filter (or screen) support member with a screen mesh to serve the dual purposes of withstanding the internal pressures generated by the flowing elastomeric material and for filtering foreign particulate from such material (column 8, lines 55 – 65). In addition, Greenstreet, et al. teach that it is common in various industries to use a breaker plate screen support with screen packs to filter out the foreign matter; however, previous breaker plate screen supports fail to withstand the high pressures generated during extrusion and thus, excess heat is generated within the stream of elastomeric material (column 1, lines 40 – 45; column 2, lines 35 – 40). Therefore, though Solomon only shows a breaker plate, the reference of Greenstreet, et al. shows that the use of a breaker plate in conjunction with a mesh screen is known to those of ordinary skill in the art. Furthermore, Greenstreet, et al. further shows that his screen assembly, comprised of the filter support plate *and* mesh screen serves to withstand the high pressures created by the elastomeric material while filtering out foreign matter. In addition, Greenstreet, et al. also teach that his filter assembly can be utilized with various size screen mesh, since change-out of the mesh is only required without modifying the filter support member (column 3, lines 17 – 20). Thus, Examiner has shown that the breaker plate of Solomon can be configured to use the filter assembly of Greenstreet, et al. With the newly-applied reference of Greenstreet, et al., Examiner has again cited the references of Marin, Portinari, and Rosato for the subsequent dependent claims.

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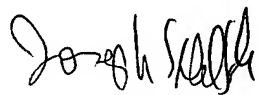
Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MVE


JOSEPH S. DEL SOLE
PRIMARY EXAMINER
3/2/06